### **Environmental Protection Agency**

Inter- ference gas	Concentration	Applicable analyzer
CO-	14 percent	СО
C <sub>3</sub> H <sub>8</sub>	1 percent	CO
H <sub>2</sub> O	Saturated vapor at 100° F	CO
NO <sub>x</sub>	1,000 ppm	CO
O <sub>2</sub>	5 percent	CO

- (8) The analyzer shall be able to meet the specifications in paragraph (a) of this section under the following conditions:
- (i) After a 30 minute warm-up from the prevailing ambient conditions;
- (ii) Between 0 to 85 percent relative humidity; and
- (iii) During variations of  $\pm 50$  percent of nominal sample flow.
- (b) The inclusion of a raw  $CO_2$  analyzer as specified in §86.309–79 and §86.316–79 is required in order to accurately determine the CVS dilution factor

[48 FR 52252, Nov. 16, 1983, as amended at 60 FR 34377, June 30, 1995]

### $\S 86.1513-90$ Fuel specifications.

The requirements of this section are set forth in §86.1313-90(a) for heavyduty engines, and in §86.113-90(a) for light-duty trucks.

[53 FR 478, Jan. 7, 1988]

### §86.1513-94 Fuel specifications.

The requirements of this section are set forth in §86.1313-94 for heavy-duty engines and in §86.113-94 for light-duty trucks.

[59 FR 48536, Sept. 21, 1994]

#### §86.1514-84 Analytical gases.

- (a) The final idle emission test results shall be reported as percent for carbon monoxide on a dry basis.
- (b) If the raw CO sampling system in §86.309-79 is used, the analytical gases specified in §86.308-79 shall be used.
- (c) If a CVS sampling system is used, the analytical gases specified in §86.1314 shall be used.

[48 FR 52252, Nov. 16, 1983, as amended at 51 FR 24613, July 7, 1986; 60 FR 34377, June 30, 1995]

## § 86.1516-84 Calibration; frequency and overview.

- (a) Calibrations shall be performed as specified in §§ 86.1518–84 through 86.1526–84.
- (b) At least monthly or after any maintenance which could alter calibration, check the calibration of the CO analyzer. Adjust or repair the analyzer as necessary.
- (c) Water traps, filters, or conditioning columns should be checked before each test.

#### §86.1519-84 CVS calibration.

If the CVS system is used for sampling during the idle emission test, the calibration instructions are specified in §86.1319-84 for heavy-duty engines, and §86.119-78 for light-duty trucks.

## §86.1522–84 Carbon monoxide analyzer calibration.

- (a) *Initial check*. (1) Follow good engineering practice for instrument startup and operation. Adjust the analyzer to optimize performance on the range specified in §86.1511–84(a)(1).
- (2) Calibrate the analyzer with the calibration gas specified in §86.1514-84.
- (3) Adjust the electrical span network such that the electrical span point is correct when the analyzer reads the calibration gas correctly.
- (4) Determine that the analyzer complies with the specifications in § 86.1511-84.
- (b) *Periodic check*. Follow paragraphs (a) (1), (2), and (3) of this section as specified by §86.1516–84(b). Adjust or repair the analyzer as necessary.

## § 86.1524–84 Carbon dioxide analyzer calibration.

- (a) The calibration requirements for the dilute-sample  $CO_2$  analyzer are specified in §86.1324–84 for heavy-duty engines and §86.124–78 for light-duty trucks.
- (b) The calibration requirements for the raw  $CO_2$  analyzer are specified in  $\S 86.330$ –79.

# §86.1526-84 Calibration of other equipment.

Other test equipment used for testing shall be calibrated as often as necessary according to good engineering practice.